CONTENTS OF VOLUME XXXIII

NUMBER I

PAGE

Some Facts and Theories Concerning Laccoliths. Gerald R. MacCarthy 1

On the Genera Cladochonus and Monilopora. George H. Girty . 19

A Discussion of Certain Geologic Features of the Wasatch Mountains. Hyrum Schneider 28

Stratigraphy of the Kimmswick Limestone of Missouri and Illinois. John H. Bradley, Jr. 49

The Origin of Swimming Woman Canyon, Big Snowy Mountains, Montana, an Example of a Pseudo-Cirque Formed by Landslide Sapping. O. W. Freeman 75

On the Force of Crystallization of Calcite. E. P. Rothrock . . 80

The Ancestral Rocky Mountains of Colorado and New Mexico. Frank A. Melton 84

Reviews 90

NUMBER II

The Spokane Flood Beyond the Channeled Scablands. J Harlen Bretz 97

Earth Movements Accompanying the Katmai Eruption. Clarence N. Fenner 116

On the Mechanics of Dike Intrusion. M. P. Billings 140

Discovery of Life in the Archean. John W. Gruner 151

A Discussion of N. L. Bowen's Paper, "The Problem of the Anorthosites." W. N. Lodochnikow 153

An Ophiacodont Reptile from the Permian of Kansas. Alfred Sherwood Romer 173

The Age of the Trent Marl in North Carolina. Lewis Burnett Kellum 183

Reviews 188

NUMBER III

Earth Movements Accompanying the Katmai Eruption. II. Clarence N. Fenner 193

The Bearing of Some Remarkable Potholes on the Early Pleistocene Glaciation of the Front Range, Colorado. Margaret Bradley Fuller 224

PAGE

THE SPOKANE FLOOD BEYOND THE CHANNELED SCABLANDS. II. J Harlen Bretz 236

CHINK-FACETING: A NEW PROCESS OF PEBBLE-SHAPING. Chester K. Wentworth. 260

A NOTE ON THE ELASTICITY OF SOME MINERALS AND ITS MEASUREMENT. Albert Johannsen and T. C. Phemister 268

ROCKY MOUNTAIN STRUCTURE. Bailey Willis 272

A NOTE ON THE MICROSCOPIC RELATIONS OF SULPHIDES AND SILICA IN BLAST-FURNACE AND CONVERTER LININGS. T. C. Phemister . . 278

MUD CRACKS FORMING OVER WATER. Bradford Willard 286

REVIEWS 288

SUPPLEMENT

THE ANALYSIS OF GASES OBTAINED FROM VOLCANOES AND FROM ROCKS. E. S. Shepherd

Introduction 289

Part I. Collection of the Sample 290

Part II. Analysis of Gases and Other Volatile Products . . . 301

Part III. General Character of the Results. 363

Summary 369

NUMBER IV

THE ORDOVICIAN-SILURIAN BOUNDARY IN BRITAIN AND NORTH AMERICA. Owen Thomas Jones. 371

THE GRENVILLE PRE-CAMBRIAN SUBPROVINCE. M. E. Wilson . . 389

OBSERVATIONS ON THE NORDENSKIÖLD AND NEIGHBORING GLACIERS OF SPITSBERGEN. George Slater 408

PERMIAN AMPHIBIAN AND REPTILIAN REMAINS DESCRIBED AS *Stephanospondylus*. Alfred Sherwood Romer 447

A PROBABLE FOSSIL GLACIER. W. Horatio Brown 464

NUMBER V

THE VERMILION BATHOLITH OF MINNESOTA. Frank F. Grout . . 467

THE GIANTS RANGE BATHOLITH OF MINNESOTA. Ira S. Allison . . 488

AMOUNT OF ASSIMILATION BY THE SUDBURY NORITE SHEET. G. W. Bain 509

MELILITE AND NEPHELITE BASALT IN HAWAII. Norman E. A. Hinds . 526

A NEW TYPE OF SILURIAN WORM. Stuart Weller 540

THE EXTRACTION OF FOSSILS FROM REFRACTORY ROCKS. G. Dallas Hanna. 545

THE RATE OF SOLUTION OF GYPSUM. F. H. Lahee 548

Comparison of the Devonian Rocks of Illinois and Missouri. T. E. Savage 550
Reviews 559

NUMBER VI

Rocky Mountain Peneplains Northeast of Yellowstone Park. Arthur Bevan 563
The Post-Monterey Disturbance in the Salinas Valley, California. R. D. Reed. 588
The Structural Dynamics of the Livermore Region. Frederick P. Vickery 608
Evidence of Liquid Immiscibility in a Silicate Magma, Agate Point, Ontario. T. L. Tanton 629
The Need of Improved Technique in Illustration. George H. Hudson 642
Reviews 658

NUMBER VII

Carbonate Dikes of the Premier Diamond Mine, Transvaal. Reginald A. Daly 659
The Geologic Rôle of Dilatancy. Warren J. Mead 685
The Jordan Sandstone. Clinton R. Stauffer 699
Studies in the Feldspar Group. A. N. Winchell 714
Pre-Keewatin Sediments of the Upper Harricana Basin, Quebec. George W. Bain 728
A Note on Rhizocretions. E. M. Kindle 744
The Spokane Flood: A Discussion. Olaf P. Jenkins 747
Reviews 749

NUMBER VIII

The Wedge Theory of Diastrophism. Rollin T. Chamberlin . . 755
Exfoliation as a Phase of Rock Weathering. Eliot Blackwelder . 793
Correlation of Permo-Carboniferous Red Beds in Southwestern Colorado and Northern New Mexico. Frank A. Melton . . 807
Amphitheater Valley Heads. Norman E. A. Hinds 816
A Criticism of the Application of the Theory of Assimilation to the Sudbury Sheet. T. C. Phemister. 819
The Amount of Assimilation by the Sudbury Norite Sheet. N. L. Bowen. 825
Reviews 830
Index 831